SUBSTITUTE ABSTRACT

A sterilization chamber and methods for sterilizing objects wherein a vapor composite, composed of water vapor and hydrogen peroxide vapor, is guided without a carrier gas flow into the sterilization chamber in which a vacuum prevails, whereby the vapor composite settles on the surfaces of the objects to be sterilized and on the surfaces of the sterilization chamber in the form of a condensation layer, which may be suctioned off by means of further evacuation of the sterilization chamber after a certain reaction time. The surfaces of the sterilization chamber are configured from poor heat-conducting, water-repellent material.